



# Launch Mission Execution Forecast

**Mission:** Falcon 9 Starlink 4-10

**Issued:** 07 Mar 2022 / 0845L (1345Z)

**Valid:** 09 Mar 2022 / 0835 – 1036L (1335 – 1536Z)



**Forecast Discussion:** This week we can expect overall windier and wetter conditions than experienced throughout the weekend. Ahead of an approaching cold front, winds will shift to become more southerly – spurring an increasing amount of moisture in the area. The front will stall along the panhandle of Florida, keeping any frontal or post-frontal impacts from reaching the Spaceport. The main concerns for this week will be recurring sea breeze collisions that are expected each evening, triggering showery conditions as a result of the increased moisture. The primary concern for a Wednesday launch is the Cumulus Cloud Rule, as there is a slight possibility that those evening showers persist into the early morning launch window.

In the case of a 24-hour delay, Thursday's conditions look largely similar to Wednesday's. Overnight showers have a similar chance of pushing into the launch window. Stronger winds can be expected in comparison to Wednesday, leading to the Cumulus Cloud Rule and Liftoff Winds being the primary weather concerns for Thursday.

Launch Day	Probability of Violating Weather Constraints <sup>1</sup>							
	10%	Primary Concerns: Cumulus Cloud Rule						
	Weather Conditions					Additional Risk Criteria <sup>2</sup>		
	Weather/Visibility:	Isol'd Showers / 7 mi.	Type	Coverage	Base (ft)	Tops (ft)	Upper-Level Wind Shear:	Low
	Temp/Humidity:	72°F / 87%	Cumulus	Scattered	2,000	4,000	Booster Recovery Weather:	Low
24-Hour Delay	Liftoff Winds (200'):	200° 15 - 20 mph					Solar Activity:	Low
	Probability of Violating Weather Constraints							
	20%	Primary Concerns: Cumulus Cloud Rule, Liftoff Winds						
	Weather Conditions					Additional Risk Criteria		
	Weather/Visibility:	None / 7 mi.	Type	Coverage	Base (ft)	Tops (ft)	Upper-Level Wind Shear:	Low
Notes	Temp/Humidity:	73°F / 92%	Cumulus	Few	2,000	5,000	Booster Recovery Weather:	Low
	Liftoff Winds (200'):	180° 20 - 25 mph					Solar Activity:	Low
	1. The Probability of Violation (PoV) is the chance of a local safety or customer constraint violation occurring anytime during the launch window. 2. Additional Risk Criteria, which are not included in the PoV, are mission-specific constraints that may not include all phenomena within each risk factor.  See <a href="https://www.patrick.spaceforce.mil/Portals/14/Weather/LaunchFAQ.pdf">https://www.patrick.spaceforce.mil/Portals/14/Weather/LaunchFAQ.pdf</a> for more information							
Note: The Probability of Violation (POV) is the chance that a Lightning Launch Commit Criteria (LLCC) or certain user constraints (surface winds, precipitation, and temperatures, etc.) will be violated during the launch window. It does not take into account upper-level wind shear, booster recovery weather, and solar activity.								
Next Forecast Will Be Issued			08 MAR 2022					